

WE CLAIM:

- 1 1. A process for the hydrogenation of alkylaryl
2 ketones, which process comprises contacting a feed
3 comprising the alkylaryl ketones and from 0.5% to 30%
4 by weight of phenolic compounds with hydrogen in the
5 presence of a heterogeneous hydrogenation catalyst.
- 1 2. The process of claim 1, in which the
2 hydrogenation catalyst comprises copper as metal or
3 metal compound.
- 1 3. The process of claim 1, wherein at least part of
2 the phenolic compounds are added to the feed
3 comprising the alkylaryl ketones.
- 1 4. The process of claim 1, comprising the steps of:
2 (a) contacting a feed comprising the alkylaryl
3 ketones and from 0.5% to 30% by weight of phenolic
4 compounds with hydrogen in the presence of a
5 heterogeneous hydrogenation catalyst; and,
6 (b) removing at least part of the alkylaryl
7 alcohol formed in step (a) from a stream comprising
8 the phenolic compounds.
- 1 5. The process of claim 1, in which the alkylaryl
2 ketone is acetophenone.
- 1 6. The process of claim 1, in which the feed
2 comprising the alkylaryl ketones is obtainable by a
3 process comprising the steps of:
4 (i) contacting a feed comprising alkylaryl
5 compounds with oxygen to obtain a feed comprising
6 alkylaryl hydroperoxides and alkylaryl ketones;
7 (ii) contacting the feed obtained in step (i) with
8 an alkene in the presence of a catalyst to obtain a
9 reaction mixture comprising alkylene oxide, alkylaryl
10 alcohol and alkylaryl ketones; and,
11 (iii) removing at least part of the alkylene oxide
12 and alkylaryl alcohols from the reaction mixture

13 obtained in step (ii) to obtain the feed comprising
14 alkylaryl ketones.

1 7. The process of claim 7, in which the
2 hydrogenation catalyst comprises copper as metal or
3 metal compound.

1 8. The process of claim 7, wherein at least part of
2 the phenolic compounds are added to the feed
3 comprising the alkylaryl ketones.

1 9. The process of claim 7, comprising the steps of:
2 (a) contacting a feed comprising the alkylaryl
3 ketones and from 0.5% to 30% by weight of phenolic
4 compounds with hydrogen in the presence of a
5 heterogeneous hydrogenation catalyst; and,
6 (b) removing at least part of the alkylaryl alcohol
7 formed in step (a) from a stream comprising the
8 phenolic compounds.

1 10. The process of claim 7, in which the alkylaryl
2 ketone is acetophenone.

1 11. A process for the preparation of a heterogeneous
2 hydrogenation catalyst having an improved activity,
3 which process comprises the steps of:
4 (a1) preparing a hydrogenation catalyst that is
5 essentially insoluble in the reaction medium; and,
6 (a2) contacting the hydrogenation catalyst obtained
7 in step (a1) with a feed comprising of from 0.5% to
8 100% by weight of phenolic compounds.

1 12. The process of claim 12, wherein the
2 hydrogenation catalyst comprises copper as metal or
3 metal compound.

1 13. A catalyst obtainable by the process comprising:
2 (a1) preparing a hydrogenation catalyst that is
3 essentially insoluble in the reaction medium; and,

5 (a2) contacting the hydrogenation catalyst obtained
6 in step (a1) with a feed comprising of from 0.5% to
7 100% by weight of phenolic compounds.